

## REMARKS

Claims 1-25, 28-34, 36, 38, 39, 41, 43, and 45-50 are pending in this application. Claims 1, 4, 9-11, 13, 22, 24, 25, 28-30, 32, 38, 43, and 45-47 have been amended. Claims 26, 27, 35, 37, 40, 42, and 44 have been cancelled. New Claims 49-50 have been added. Support for the amendments and new claims is found in the specification and claims as filed.

### **Objection to the Specification**

The specification has been objected to as not providing proper antecedent basis for the subject matter of claim 23. Applicant respectfully disagrees with the rejection, and notes that support for the claimed subject matter is found on page 28, at line 17 (“activated charcoal”), lines 27 (“activated carbon”), and line 14 (“about 100 vol. % is filled”). Accordingly, Applicant respectfully requests that the objection be withdrawn.

### **Claim Rejections - 35 U.S.C. § 112, first paragraph**

Claim 32 has been rejected under 35 U.S.C. §112, first paragraph, on the basis of the specification not reasonably providing enablement for a comparison to a smokable material alone without a catalyst. Applicant respectfully disagrees with the rejection, but has amended Claim 32 to clarify the claimed subject matter. Claim 32 now recites, *inter alia*, a method wherein one of the steps includes “combusting the smoking composition, whereby a smoke is produced, wherein a concentration of a carcinogenic substance in the smoke from the smoking composition is less than a concentration of the carcinogenic substance in a smoke from the smokable material.” For a comparison of a smokable material with the catalyst and nitrate source to a smokable material without the catalyst and nitrate source, please see the data reported in Tables 2 and 3, pages 44-45. Accordingly, Applicant respectfully requests that the rejection be withdrawn.

### **Claim Rejections - 35 U.S.C. § 112, second paragraph**

Claims 9-11, 13 and 32 have been rejected under 35 U.S.C. §112, second paragraph, on as lacking antecedent basis. Claims 9 and 11 have been amended to recite “the plurality of carbonaceous or metallic catalytic particles.” Claim 10 has been amended to depend from Claim 9. Claim 13 has been amended to recite “crystalline palladium particles.” Claim 32 has been amended as described in the previous paragraph. Accordingly, Applicant respectfully requests that the rejections be withdrawn.

Claims 4 and 26 have been rejected under 35 U.S.C. §112, second paragraph, as reciting “tobacco-specific nitrosamines” but not requiring tobacco. To clarify the claimed subject matter,

Claim 4 now refers to “nitrosamines” rather than “tobacco-specific nitrosamines.” Claim 26 has been cancelled. Accordingly, Applicant respectfully requests that the rejection be withdrawn.

Claims 22-23 have been rejected under 35 U.S.C. §112, second paragraph, as not reciting a structural relationship between a filter and a smoking composition. To clarify the claimed subject matter, Claims 22 now recites, *inter alia*, that “the cavity filter is in communication with the smokable material such that, in use, a smoke from the smokable material is drawn through the cavity filter.” Accordingly, Applicant respectfully requests that the rejection be withdrawn.

Claims 24 and 38 have been rejected under 35 U.S.C. §112, second paragraph, as reciting “undesirable” components or substances. Claims 24 and 38 and their corresponding dependent claims have been amended to refer to “components” or “substances,” rather than “harmful components” or “harmful substances.” Accordingly, Applicant respectfully requests that the rejection be withdrawn.

**Claim Rejections - 35 U.S.C. § 102(b) - Dale et al.**

Claims 1-2, 4-13, 17, and 24-48 have been rejected under 35 U.S.C. §102(b) as anticipated by U.S. 4,317,460 (hereinafter “Dale, et al.”). “A rejection for anticipation under section 102 requires that each and every limitation of the claimed invention be disclosed in a single prior art reference.” *See, e.g., In re Paulsen*, 31 USPQ2d 1671 (Fed. Cir. 1994). Dale et al. does not disclose every element of Applicant’s claims, and therefore cannot be considered as an anticipating reference under 35 U.S.C. § 102(b).

Pending independent Claims 1, 24, and 32 recite a composition or methods wherein the plurality of metallic or carbonaceous catalytic particles and the nitrate or nitrite source are added to the smokable material after a casing solution is added to the smokable material, and wherein the plurality of metallic or carbonaceous catalytic particles and the nitrate or nitrite source are added to the smokable material separately. Pending independent Claim 38 recites a method wherein the plurality of metallic or carbonaceous catalytic particles and the nitrate or nitrite source are added to the tobacco after a casing solution is added to the tobacco, and wherein the plurality of metallic or carbonaceous catalytic particles and the nitrate or nitrite source are added to the tobacco separately. Dale et al. discloses a microporous support carrying a first redox component (e.g. a palladium or other noble metal compound) and second redox component (e.g., a metal nitrate). The support carrying the first and second redox components can be distributed through smoking products or included in a filter for a smoking product. Dale et al. does not

disclose adding the support carrying the first and second redox components to the smoking material in a form separate from the casing solution, nor does Dale et al. disclose adding a first redox component and a second redox component to a smoking material separately. method

Thus Dale et al. does not disclose each and every limitation of the invention as presently claimed, and therefore cannot anticipate the independent claims and their corresponding dependent claims. Accordingly, Applicant respectfully requests that the anticipation rejection be withdrawn.

**Claim Rejections - 35 U.S.C. § 102(b) - Bryant et al.**

Claims 1-2, 4-21 and 24-48 have been rejected under 35 U.S.C. §102(b) as anticipated by U.S. 4,235,251 (hereinafter "Bryant et al."). Bryant et al. does not disclose every element of Applicant's claims, and therefore cannot be considered as an anticipating reference under 35 U.S.C. § 102(b).

As discussed above, pending independent Claims 1, 24, and 32 recite a composition or methods wherein the plurality of metallic or carbonaceous catalytic particles and the nitrate or nitrite source are added to the smokable material after a casing solution is added to the smokable material, and wherein the plurality of metallic or carbonaceous catalytic particles and the nitrate or nitrite source are added to the smokable material separately. Pending independent Claim 38 recites a method wherein the plurality of metallic or carbonaceous catalytic particles and the nitrate or nitrite source are added to the tobacco after a casing solution is added to the tobacco, and wherein the plurality of metallic or carbonaceous catalytic particles and the nitrate or nitrite source are added to the tobacco separately. Bryant et al. discloses a method for improving the stability of metallic palladium dispersions in conventional tobacco casing systems. Bryant et al. does not disclose adding the metallic palladium in a form separate from the casing solution. Bryant et al. also discloses adding magnesium nitrate to the casing solution. Bryant et al. does not disclose adding the metallic palladium and the magnesium nitrate to the tobacco separately. not

Bryant et al. therefore cannot anticipate the independent claims and their corresponding dependent claims. Accordingly, Applicant respectfully requests that the anticipation rejection be withdrawn.

**Claim Rejections - 35 U.S.C. § 103(a) - Norman et al. in view of Dale et al.**

Claims 1-21 and 24-48 have been rejected under 35 U.S.C. §103(a) as obvious over U.S. 4,216,784 (hereinafter "Norman et al.") in view of Dale et al. To establish a prima facie case of

obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings so as to arrive at the claimed invention. *See, e.g.*, M.P.E.P. § 2142. As discussed below, there is no such suggestion or motivation in either of these references to modify or combine them so as to arrive at the presently claimed invention.

Norman et al. discloses adding a palladium catalyst and a nitrate to tobacco. While various application methods are disclosed, adding the palladium catalyst and nitrate to tobacco as part of the casing solution is clearly preferred: "We have found that the combination of palladium and a nitrate compound is most efficiently applied in a conventional casing solution such as one comprising glycerin, propylene glycol and sugars to which a solution of ammonium hexachloropalladate and a sufficient amount of water to solubilize the requisite amount of nitrate compound have been added." (Norman et al., col. 6, lines 3-9). Norman et al. neither teaches or suggests adding the palladium and nitrate compound to the tobacco in a form separate from the casing solution so as to obtain superior reductions in PAH levels. Likewise, Dale et al. neither teaches nor suggests adding the support carrying the first and second redox components to the smoking material in a form separate from the casing solution.

There is no teaching or motivation in Norman et al. and Dale et al., either alone or in combination, to add the catalytic particles and the nitrate or nitrite source to the tobacco in a form separate from the casing solution, as is presently claimed. Therefore, a *prima facie* case of obviousness cannot be established. Accordingly, Applicant respectfully requests that the obviousness rejection be withdrawn.

**Claim Rejections - 35 U.S.C. § 103(a) - Bryant et al. in view of Neukomm**

Claims 1-21 and 24-48 have been rejected under 35 U.S.C. §103(a) as obvious over Bryant et al. in view of U.S. 4,201,234 (hereinafter "Neukomm"). There is no suggestion or motivation to modify or combine these references so as to arrive at the presently claimed invention. Accordingly, a *prima facie* case of obviousness cannot be established

As discussed above in regard to the obviousness rejection over Norman et al. in view of Dale et al., there is no teaching or motivation in these references to add the catalytic particles and the nitrate or nitrite source to the tobacco in a form separate from the casing solution, as is presently claimed. Neukomm is directed to a filter for a smoking article. Neukomm does not

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disclose adding catalytic particles and a nitrate or nitrite source to tobacco, much less adding them in a form separate from the casing solution.

There is no teaching or motivation in Norman et al. and Neukomm, either alone or in combination, to add the catalytic particles and the nitrate or nitrite source to the tobacco in a form separate from the casing solution, as is presently claimed. Therefore, a *prima facie* case of obviousness cannot be established.

### **Conclusion**

In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns that might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number below.

Respectfully submitted,

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